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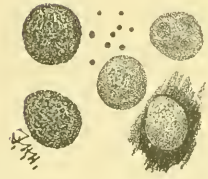
Bulletin 156 February, 1912

NEW HAMPSHIRE
AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF AGRONOMY

Results of Seed Tests

For 1911

MADE FOR THE
STATE BOARD OF AGRICULTURE



SEEDS OF CLOVER DODDER

SEEDS OF SORREL

SEEDS OF WITCH-GRASS

SEEDS OF GREEN FOXTAIL

BY F. W. TAYLOR

NEW HAMPSHIRE COLLEGE
OF
AGRICULTURE AND THE MECHANIC ARTS
DURHAM, N. H.

NEW HAMPSHIRE COLLEGE OF AGRICULTURE
AND THE MECHANIC ARTS

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION

DURHAM, N. H.

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The bulletins of the Experiment Station are published at irregular intervals and are sent *free* to all residents of New Hampshire requesting them.

SEED TESTS.

Made July 1, 1910, to July 1, 1911.

The provisions of the Pure Seed Law enacted by the General Court in 1909 require the publication annually of a bulletin by the New Hampshire Experiment Station of the results of all seed tests made officially during the previous year. The administration of said law is in the hands of the secretary of the State Board of Agriculture, who has appointed the writer, agronomist of the experiment station, as his regular agent for making all tests and analyses in this state.

During the year only seventy-two samples of seed were examined as against two hundred and thirty-eight samples for the year preceding. This very small number of tests for as much seed as is sold in the state indicates one of three conditions: (1) that the seedsmen and seed dealers are buying their seeds from outside parties upon a purity and germination test guarantee; (2) that the seedsmen and dealers are making their own tests and basing their guarantees upon them; or (3) that the farmers are buying seeds without any guarantee of their purity and vitality.

Of the few samples tested the analytic agent has no knowledge that seeds which these samples represented were offered for sale in the state. Quite frequently samples are sent in for inspection by dealers before purchase in lot or bulk is made, and if the test shows the seeds to be of inferior quality it is presumed the seeds are not purchased. Individuals sometimes ask for a report upon the quality of a given sample and make the purchase of seed for their own use upon the basis of said report. It should not, therefore, be understood that all of the seeds represented by the samples inspected were offered for sale by the parties for whom the inspection was made.

The writer acknowledges his appreciation of the work of Professor W. L. Slate, Jr., who made the tests and examinations of the samples herewith reported.

SEED EXAMINATION, 1911.

Sample Number	Kind of Seed, Sender, Date of Report, and Kind and Number of Foreign Seeds found in One Pound	Percent of Pure seed	Percent of Weed Seed	Percent of other Grass Seeds	Percent of Inert Matter	Percent of Germination
239	**Alfalfa,** (*P. A.*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Nov. 1, 1910. Dodder and Trefoil found.	98.5	.....	.....	1.5	.....
240	**Alfalfa,** ("*Bart*") ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Nov. 18, 1910. Pig-weed, 90.	95.8	trace	.....	4.1	.....
241	**Alfalfa,** ("*S*") ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Nov. 19, 1910. Sorrel, 90; trace of Alfalfa dodder.	98.4	trace	.....	1.5	.....
242	**Alfalfa,** (*Ipas*) ... Whitney-Eckstein seed Co., Buffalo, N. Y. Nov. 21, 1910. Red Clover, 180; Green foxtail, 1,530; Rib-grass, 180; Wild carrot, 90.	97.1	.6	trace	2.2	.....
248	**Timothy,** (*Choice*) ... Whitney-Eckstein Seed Co. Buffalo, N. Y. Jan. 23. Alsike clover, 1,135; Red clover, 227.	99.1	.....	.5	.4	77.5
249	**Timothy,** (*Pan-American*) ... Whitney Eckstein Seed Co., Buffalo, N. Y. Jan. 23. Alsike clover, 681; Sorrel, 227.	99.7	trace	.1	.1	61.0
250	**Timothy,** (*Gold Medal*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Alsike clover, 1,135.	99.6	.....	.1	.2	91.0
251	**Redtop,** (*Fancy*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Feb. 11.	.....	.....	.....	.....	51.0
252	**Redtop,** (*Choice*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Feb. 11.	.....	.....	.....	.....	57.0
253	**Alsike clover,** (*Pan-American*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Canada thistle, 227; Red clover, 908; Sorrel, 908; Timothy 17,706; unknown, 227.	96.2	.1	2.0	1.7	75.5
254	**Red clover,** (*Pan-American*) ... Whitney-Eckstein Seed Co., Buffalo N. Y. Jan. 28. Alsike clover, 273; Green foxtail, 91; Rib-grass, 91; Timothy, 273; Miscellaneous, 1,500.	96.1	.6	.1	3.2	91.0
255	**Hungarian millet** ... Whitney-Eckstein Seed Co , Buffalo, N. Y. Jan. 23. Lamb's-quarters, 182; Old Witch-grass, 273; Yellow foxtail, 91.	98.8	.1	.....	1.1	91.0
256	**Red clover,** (*Eureka*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Alsike clover, 182; Timothy, 91.	98.6	.....	.....	1.4	88.0
257	**Alfalfa,** (*Fancy*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28.	99.1	trace	.....	.9	82.0
258	**Alsike clover,** (*Export Fancy*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Chickweed, 454; Shepherd's Purse, 454.	99.5	.1	.....	.4	83.0
259	**Japanese millet** ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Crab-grass, 454; Peppergrass, 91; Red clover, 91; Smartweeds, 910; Yellow fox-tail, 91; Sunflower, 182.	97.8	.9	trace	1.3	32.5
260	**Red clover** ... Maxfield & Sanborn, Pittsfield, N. H. Jan. 24. Green fox-tail, 364; Rib-grass, 364; Timothy, 91; Miscellaneous, 364.	98.5	.5	trace	.8	76.0
261	**Red clover,** (*No. 44*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Chickweed, 182; Greed fox-tail 2,275; Rib-grass, 546; Sorrel, 182; Timothy, 454; Yellow fox-tail, 91; Mallow, 91.	97.4	.9	trace	1.6	79.5
262	**Timothy,** (*No. 384*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Alsike clover, 454.	99.5	.....	trace	.4	90.0
263	**Timothy,** (*No 385*) ... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Alsike clover, 1,135; Kentucky bluegrass, 227.	99.5	.....	.2	.3	92.5

SEED EXAMINATION, 1911.—*Continued.*

Sample Number	Kind of Seed, Sender, Date of Report, and Kind and Number of Foreign Seeds found in One Pound	Percent of Pure Seed	Percent of Weed Seed	Percent of other Grass Seeds	Percent of Inert Matter	Percent of Germination
264	**Red clover,** (*No.* 1,430) ..... Whitney-Eckstein Seed Co., Buffalo, N. Y. Jan. 28. Alsike clover, 3,276; Chickweed, 91; Green fox-tail, 3,276; Lamb's-quarters, 91; Old Witch-grass, 91; Rib-grass, 1,365; Timothy, 1,274; Miscellaneous, 637.	95.7	1.5	.6	2 0	78.5
265	**Red clover,** (*"Con"*) ..... Whitney-Eckstein Seed Co., Buffalo N. Y. Feb. 11. Alsike clover, 637; Sorrel, 91; Timothy, 182; White clover, 182.	98.9	trace	.3	.8	.....
266	**Redtop,** (*Fancy*) ..... Rand, Ball & King Co., Claremont, N. H. March 20. Chickweed, 3,632; Whiteweed, 1,816.	94.8	.5	.....	4.7	53.5
267	**Mammoth clover** ..... Rand, Ball & King Co , Claremont, N. H. March 20. Alsike clover, 819; Mallow, 91; Ragweed, 1,456; Timothy, 454; Yellow fox-tail, 91.	98.3	.5	.2	1.0	80.0
268	**Red clover,** (*Eureka*) ..... Rand, Ball & King Co., Claremont, N. H. March 20. Alsike clover, 728; Docks, 91; Sorrel, 182; Timothy, 182.	99.4	trace	.2	.4	83.0
269	**Alsike clover,** (*Export*) ..... Rand, Ball & King Co., Claremont, N. H. March 20. Chickweed, 454; Kentucky bluegrass, 227; Red clover, 671; Shepherd's Purse, 454; Sorrel, 1,362.	99.2	.3	.1	.4	83.0
270	**Hungarian millet** ..... Rand, Ball & King Co., Claremont, N. H. March 20. Yellow fox-tail, 1,638; Siberian millet, 455.	98.7	.9	.2	.2	82.0
271	**Timothy,** (*Pan-American*) ..... Rand, Ball & King Co., Claremont, N. H. March 20. Alsike clover, 4,510, Kentucky bluegrass, 227; Rib-grass, 227.	99.1	trace	.6	.3	83.0
272	**Timothy,** (*Gold Medal*) ..... Rand, Ball & King Co., Claremont, N. H. March 20. Alsike clover, 1,135.	99.6	.....	.1	.2	86.0
273	**Peas,** (*Nott's Excelsior*) ..... J. B. Varick Co., Manchester, N. H. Feb. 27.	.....	.....	.....	.....	87.0
274	**Beans,** (*Rust Proof Blk. Wax* ..... J. B. Varick Co., Manchester, N. H. Feb. 27.	.....	.....	.....	.....	97.0
275	**Peas,** (*Dwarf Champ.*) ..... J. B. Varick Co., Manchester, N. H. Feb. 27.	.....	.....	.....	.....	68.0
276	**Peas,** (*Premium Gem*) ..... J. B. Varick Co. Manchester, N. H. Feb. 27.	.....	.....	.....	.....	82.0
277	**Peas,** (*Champ. of England*) ..... J. B. Varick Co., Manchester, N. H. Feb. 27.	.....	.....	.....	.....	77.0
278	**Peas,** (*Horsford's Market*) ..... J. B. Varick Co., Manchester, N. H. Feb. 28.	.....	.....	.....	.....	83.5
279	**Peas,** (*Gradus*) ..... J. B. Varick Co., Manchester, N. H. Feb. 28.	.....	.....	.....	.....	72.5
280	**Peas,** (*Maud S.*) ..... J. B. Varick Co.. Manchester, N. H. Feb. 28.	.....	.....	.....	.....	98.0
281	**Peas,** (*Sir Thos. Laxton*) ..... J. B. Varick Co., Manchester, N. H. Feb. 28.	.....	.....	.....	.....	78.0
282	**Peas,** (*Ever bearing*) ..... J. B. Varick Co., Manchester, N. H. Feb. 28.	.....	.....	.....	.....	74.0
283	**Beans,** (*Dwarf Hort.*) ..... J. B. Varick Co., Manchester, N. H. Feb. 28.	.....	.....	.....	.....	94.0
284	**Beans,** (*Burpee's Stringless Podded*) ..... J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	93.0
285	**Beans,** (*Ky. Wonder*) ..... J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	96.5
286	**Beans,** (*Worceste Pole*) ..... J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	82.0
287	**Beans,** (*Long's Yel. 6-weeks*) ..... J. B. Varick Co., Manchester, N. H. March 14.	.....	.....	.....	.....	58.0
288	**Beans,** (*Red Kidney*) ..... J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	96.0
289	**Beans,** (*Imp. Golden Wax*) ..... J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	97.5

SEED EXAMINATION, 1911.—*Concluded.*

Sample Number	Kind of Seed, Sender, Date of Report, and Kind and Number of Foreign Seeds found in One Pound	Percent of Pure Seed	Percent of Weed Seed	Percent of other Grass Seeds	Percent of Inert Matter	Percent of Germination
290	**Peas,** (*Blk. Eye Marrowfat*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	90.5
291	**Beans,** (*Wardwell's Kidney Wax*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	97.0
292	**Peas,** (*Imp. Telephone*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	70.0
293	**Beans,** (*Golden Eyed Wax*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	99.0
294	**Beans,** (*Blk. Wax Pole*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	62.5
295	**Peas,** (*Alaska*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	95.0
296	**Peas,** (*Yorkshire Hero*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	63.5
297	**Peas,** (*Sutton's Excelsior*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	86.0
298	**Peas,** (*Amer. Wonder*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	87.0
299	**Peas,** (*Imp. Stratagem*) J. B. Varick Co., Manchester, N. H. March 1.	...	.....	.....	.....	72.5
300	**Peas,** (*Advancer*) J. B. Varick Co., Manchester, N. H. March 1.	.....	.....	.....	.....	76.0
301	**Red clover,** (*Max*) Whitney-Eckstein Seed Co., Buffalo, N. Y. Mar. 17. Rib-grass, 180; Hungarian millet, 273; Miscellaneous, 819.	98.5	.3	.... .	1.2	73.0
302	**Oats,** (*Peoria No. 2*) Stratton & Co., Concord, N. H. March 2.	.....	.....	.....	.....	94.5
306	**Canada Blue Grass,** (*B. & B.* 3453) Whitney-Eckstein Seed Co., Buffalo, N. Y. Mar. 17. Alsike clover, 5,448; Canada Thistle, 908; Green fox-tail, 908; Ox-eye daisy, 5,448; Shepherd's purse, 3,632; Timothy, 79,900.	86.0	.8	5.0	8.2	.....
307	**Timothy** Maxfield & Sanborn, Pittsfield, N. H. March 27. Alsike clover, 454; Poverty weed, 454.	99.7	trace	trace	.2	87.0
308	**Timothy,** (*No. 392*) Whitney-Eckstein Seed Co., Buffalo, N. Y. Mar. 29. Alsike clover, 1,135; Redtop, 1,135; Self-heal, 1,589.	99.5	.1	.2	.2	81.5
309	**Timothy,** (*No. 540*) Whitney-Eckstein Seed Co., Buffalo, N. Y. Mar. 29. Alsike clover, 454	99.5	.....	trace	.5	93.0
310	**Timothy,** (*Sec.*) Whitney-Eckstein Seed Co., Buffalo, N. Y. Mar. 29. Alsike clover, 454; Red clover, 680; Self-heal, 454.	99.4	trace	.1	.5	72.5
311	**Oats,** (*Elwood's*) E. C. & W. L. Hopkins, Greenfield, N. H. March 30. Lamb's quarters, 15; Wheat, 30.	99.0	trace	.7	.3	97.0
312	**Oats** Norris E. Henderson, Merrimack, N. H. April 5.	.....	.....	... ..	.....	84.0
313	**Alfalfa,** (*A. B.* 3) Whitney-Eckstein Seed Co., Buffalo, N. Y. April 10. Chickweed, 637; Green fox-tail, 91; Pigweed, 91; Rib-grass, 454; Bull Thistle, 91; Miscellaneous, 91.	95.7	.4	.....	4.9	.... .
314	**Oats** Nashua Grain Elevator, Nashua, N. H. April 10. Sorrel, 9; Wild mustard, 90; Sunflower, 9; Wheat, 45.	98.6	.4	.6	.4	91.5
315	**Oats** Maxfield & Sanborn, Pittsfield, N. H. April 10.	.....	.....	.....	.....	91.5
316	**Oats,** (*Native grown*) Holbrook Grocery Co., Keene, N. H. April 26.	.....	.....	.....	.....	85.0
317	**Corn,** (*Flint*) H. F. Schroeder, S. Barnstead, N. H. May 8, 1911	.....	.....	.....	.....	69.0
318	**Alfalfa** C. D. Hening, Philadelphia, Pa. June 21. Canada Thistle, 90; Hungarian millet, 270; Pigweed, 90.	99.3	.1	.. ...	.6	91.0

In general the results of the inspection show a higher average percent of purity for the grass seeds, such as timothy, redtop, millet, alfalfa, and the clovers, than was indicated for the year preceding. The average germinating quality of these seeds, however, was not as high as in 1910, the reason for which was probably due to the fact that the conditions for seed production were less favorable that year, resulting in a scarcity and high price of seed. No samples of very dirty or foul seed were inspected and a considerable less variety of weed seeds were found than last year. The conclusion is, therefore, that dealers are aiming to secure and sell seeds of a high grade of purity.

The table below and on the following page gives a condensed summary of the results.

SUMMARY TABLE, SHOWING THE KINDS OF FOREIGN SEEDS FOUND IN SAMPLES EXAMINED IN 1911 AND THE NUMBER OF SAMPLES IN WHICH THEY WERE FOUND.

Names of Foreign Seeds.	Names of Samples Examined.							
	Red Clover.	Alsike Clover.	Mammoth Clover.	Alfalfa.	Timothy.	Redtop.	Millet.	Oats.
Number of Samples Examined.	8	3	1	7	11	1	3	2
Alsike clover	5	..	1	..	11	1	..	..
Bull Thistle	..	..	..	1	..	..	..	..
Canada Thistle	..	1	..	1	..	..	..	..
Chickweed	2	2	1	..	..	1	..	..
Crab-grass	..	..	..	..	..	..	1	..
Docks	1	..	..	..	..	..	..	..
Dodder	..	..	..	1	..	..	..	..
Green fox-tail	4	..	..	2	..	..	..	..
Kentucky bluegrass	..	1	..	..	2	..	..	..
Lamb's-quarters	1	..	..	..	..	..	1	1
Mallow	1	..	1	..	..	..	..	..
Millet	1	..	..	1	..	..	..	..
Miscellaneous or unknown	4	1	..	1	..	..	..	..
Peppergrass	..	..	..	..	..	..	1	..
Pigweed	..	..	..	..	3	..	..	..
Poverty weed	..	..	..	..	1	..	..	..
Rag-weed	..	..	1	..	..	..	..	..
Red clover	..	2	..	1	2	..	1	..
Redtop	..	..	..	..	1	..	..	..
Rib-grass	5	..	..	2	1	..	..	..
Selfheal	..	..	..	..	2	..	..	..
Smartweed	..	..	..	..	..	..	1	..
Sorrel	3	2	..	1	1	..	..	1
Shepherd's Purse	..	2	..	..	..	..	..	..
Timothy	7	1	1	..	..	..	..	..
Wheat	..	..	..	..	..	..	..	2
Whitetop	..	..	..	..	..	1	..	..
White clover	1	..	..	..	..	..	..	..
Wild carrot	..	..	..	1	..	..	..	..
Wild mustard	..	..	..	..	..	..	..	1
Wild sunflower	..	..	..	..	..	..	1	1
Witch grass	1	..	..	..	..	..	1	..
Yellow fox-tail	1	..	1	..	..	..	3	..

TABLE SHOWING RESULTS OF TESTS AND EXAMINATION OF SAMPLES OF SEEDS RECEIVED FROM JULY 1, 1910, TO JULY 1, 1911.

Kind of Seed.	Total number of samples received.	For Purity Test.	For Germination.	Purity Test.										Germination Test.			
				Pure Seed.				Foreign Seed.			Inert Matter.						
				Highest percent	Lowest percent	Average percent	Standard percent	Highest percent	Lowest percent	Average percent	Highest percent	Lowest percent	Average percent	Highest percent	Lowest percent	Average percent	Standard percent
Alfalfa	7	7	2	99.3	95.7	97.7	98.	.6	.0	.2	4.9	.6	2.2	91.0	82.0	86.5	88.
Alsike clover	3	3	3	99.6	96.2	98.3	95.	2.1	.1	.9	1.7	.4	.8	83.0	75.5	80.5	78.
Beans	11	..	11	....	...	...	..	....	....	....	....	....	....	99.0	58.0	88.4	93.
Canada bluegrass	1	1	..	86.0	86.0	86.0	90.	5.8	5.8	5.8	8.2	8.2	8.2	....	.. .	....	48.
Corn (Field)	1	..	1	....	....	....	...	..	....	....	...	....	....	69.0	69.0	69.0	93.
Mammoth clover	1	1	1	98.3	98.3	98.3	98.	.7	.7	.7	1.0	1.0	1.0	80.0	80.0	80.0	88
Millet	3	3	3	98.8	97 8	98.4	99.	1.1	.1	.7	1.3	.2	.9	91.0	32.5	68.5	88.
Oats	6	2	6	99.0	98.6	98.8	99.	1.0	.7	.8	.4	.3	.3	97.0	84.0	90.6	93.
Peas	17	..	17	....	....	....	...	....	.....	...	....	....	....	98.0	63.5	80.0	95.
Red clover	8	8	7	99.4	95.7	97.9	98.	2.1	....	.6	3.2	.4	1.4	91.0	73.0	81.3	88.
Redtop	3	1	3	94.8	94.8	94.8	95.	.5	.5	.5	4.7	4.7	4.7	57.0	51.0	53.8	78.
Timothy	11	11	11	99.7	99.1	99.5	98.	.6	.0	.2	.5	.1	.3	93.0	61.0	82.3	88.
Total	72	37	65														

THE TEXT OF THE LAW

STATE OF NEW HAMPSHIRE.

IN THE YEAR OF OUR LORD ONE THOUSAND NINE HUNDRED AND NINE.

HOUSE BILL . . . . . NO. 396.

AN ACT

To Regulate the Sale of Agricultural Seeds.

Be it enacted by the Senate and House of Representatives in General Court convened:

SECTION 1. Every lot of agricultural seeds, including seeds of cereals, grasses, forage plants, vegetables, garden plants, and white pine trees, but not including those of other trees, shrubs, and ornamental plants, which is sold, offered, or exposed for sale for seed in bulk or package of one pound or more, within this state, shall be accompanied by a plainly written or printed guarantee, stating first its percentage of purity from foreign seeds and other matter, and second, its percentage of vitality.

SECT. 2. Sellers or dealers in seeds may base their guarantees upon tests or analyses conducted by themselves, their agents, or by the secretary of the State Board of Agriculture or his agents, *provided* that such tests or analyses shall be made in such a manner and under such conditions as the said secretary may prescribe.

SECT. 3. The results of all tests or analyses of seeds made by the said secretary, together with the names and addresses of the persons from whom the samples of seed were obtained, shall be published annually in a bulletin by the New Hampshire College Experiment Station, and biennially in the report of the State Board of Agriculture. The said secretary shall also publish from time to time in the quarterly report of the State Board of Agriculture equitable standards of purity and vitality, together with such information concerning agricultural seeds as may be of public benefit.

SECT. 4. Whoever sells, offers, or exposes for sale or for distribution, within this state, any agricultural seeds heretofore named in this act, without complying with the requirements of sections one and two, or whoever, with intention to deceive, wrongly marks or labels any lot of agricultural seeds, including the seeds of

cereals, grasses, forage plants, vegetables, garden plants, and white pine trees, but not including those of other trees, shrubs, and ornamental plants, as pertains to their percentage of purity and vitality, shall be punished by a fine not exceeding one hundred dollars for the first offense, and not exceeding two hundred dollars for each subsequent offense.

SECT. 5. The provisions of the four preceding sections shall not apply to any person growing, selling, offering, or exposing for sale cereals and other agricultural seeds for food.

SECT. 6. The secretary of the State Board of Agriculture shall diligently enforce the provisions of sections one and four of this act, and in his discretion prosecute offenses against the same.

THE OBJECT OF THE LAW

The object of this law is in substance the same as that of our pure food and fertilizer laws, namely, to have the buyer know just what he is buying. It is intended to provide a means whereby our farmers and other purchasers of seeds may have reliable information, on the basis of which they may protect themselves against the introduction of noxious weeds and against loss through weak or otherwise worthless seeds; also to provide a reasonable protection for careful, conscientious dealers against negligent, designing, or unscrupulous ones.

It is not the purpose or intent of the law to work a hardship on our seed dealers or to hurt their legitimate business, and neither is it intended to require farmers and other growers to purchase seeds of a better quality than they desire.

LABELING

The law does not apply to the common five and ten-cents packages of garden and flower seeds. Only seeds sold in bulk or in packages of one pound or more are subject to the provisions of the law and are required to be accompanied by a guarantee stating their percentage of purity and vitality.

The guarantee or label may be of any form desired by the seller of the seeds, as a tag, sticker, or direct brand upon the container. It must, however, be plainly written or printed, and placed distinctly visible to the purchaser. Each dealer will provide his own labels.

TAKING OF SAMPLES

To secure a fair average sample of a lot or bulk, take small quantities from all of the bags or from different parts of any particular bulk. Mix thoroughly and take out the sample to be inspected. When the seeds are in bags or large bins, the use of a grain sampler is most convenient, since this will insure getting seeds from the top, middle, and bottom alike. Since the report of the analysis is based upon the nature of the sample inspected, it is important that the sample be carefully taken.

SIZE AND AMOUNT OF SAMPLES

The size and amount of the samples necessary for a test will depend upon the size and weight of the seeds. About one half ounce, or a tablespoonful of the smaller grass and vegetable seeds, like alsike and white clover, redtop, lettuce, onions, radish, turnip, etc.; about one ounce or two tablespoonfuls of the larger seeds, like timothy, millet, red clover, alfalfa, rape, etc.; and about four ounces, or a small cupful, of the cereal grains or vegetable seeds, like oats, barley, corn, peas, beans, etc., should be sent.

SENDING OF SAMPLES

Samples sent to the experiment station for testing should be enclosed in a strong paper envelope and securely fastened. Single samples should be sent by mail at the customary merchandise rates. When a number of samples are to be sent they should be put up securely in a single package and forwarded by mail or express, whichever way is the cheaper. Samples should not be sent in bottles or glass jars. Each sample sent in should be marked as follows:

Name and address of sender.
Date of sending.
Kind of seed.
Brand name (if any), and number of package.
Purity or germination test desired (one or both).

Write a letter stating the number and kind of samples sent so that their receipt may be promptly acknowledged.

Address all samples and communications regarding the same to F. W. Taylor, Experiment Station, Durham, N. H.

TESTS AND EXAMINATIONS

Section two of the law states the provisions under which the tests and analyses shall be made. The secretary of the State Board of Agriculture has appointed F. W. Taylor, agronomist of the experiment station, as his regular agent for making all tests and analyses in this state. The sellers or dealers who desire to base their guarantees upon tests made by themselves or their agents must first secure the approval by the secretary of the State Board of Agriculture of the methods to be used in making the tests, and of the person who is to conduct them.

EXPENSES OF TESTS AND ANALYSES

As no funds are available for the secretary of the state board or for the experiment station to conduct the tests, a nominal charge, sufficient to cover the cost of making them, must be made. The charge for making a purity test will be *seventy-five* cents per sample. For seeds sold in mixtures the charge will be *seventy-five* cents for the sample and ten cents additional for each kind of seed said to be contained therein. The charge for making a germination test will be *twenty-five* cents per sample. Seeds will be tested for any resident of the state, whether a dealer or not, at the above rates.

OTHER INFORMATION

Additional information concerning standards of purity and vitality, kinds of impurities, methods of examination and testing, different kinds of germinating ovens, methods of reporting tests, etc., may be obtained by writing for Bulletin No. 148, N. H. Experiment Station.

Other publications on the subject are as follows:

Circulars Nos. 34 and 35, U. S. Department of Agriculture, Washington, D. C.

Bulletin No. S.1, Canadian Department of Agriculture, Ottawa, Can.

Bulletin No. 152, Maine Experiment Station, Orono, Me.

Bulletin No. 146, Vermont Experiment Station, Burlington, Vt.

Bulletin No. 260, Michigan Experiment Station, East Lansing, Mich.

Circular No. 4, Wisconsin Experiment Station, Madison, Wis.

Bulletin No. 127, Kentucky Experiment Station, Lexington, Ky.

Bulletin No. 115, Iowa Experiment Station, Ames, Iowa.

Bulletin No. 110, Nebraska Experiment Station, Lincoln, Neb.

Seed Bulletin No. 1, No. Dakota Experiment Station, Fargo, N. D.

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